

MVL-KF0818M-12MP

1" 8 mm 12MP FA Lens

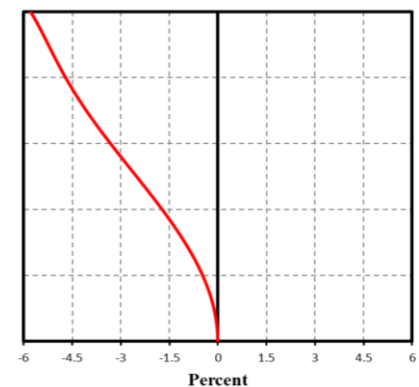
KF series FA Lens are optimized for machine vision light sources and sensors, with high resolution, excellent image uniformity, high transmittance and good stability. With fixed focal length, manual iris, and compact size, it is suitable for machine vision industry applications.



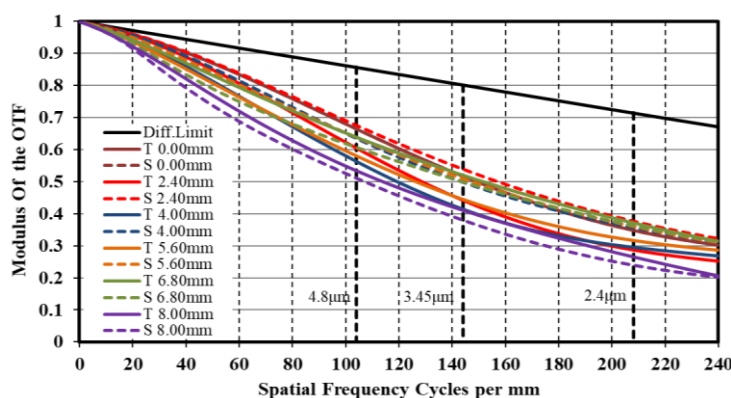
Key Features

- Provides high resolution and consistency of image clarity.
- Provides low distortion and high peripheral brightness ratio.
- Provides maximum image size $\Phi 16$ mm.
- Supports ultra-short working distance, and maintains excellent optical characteristics at different object distances.

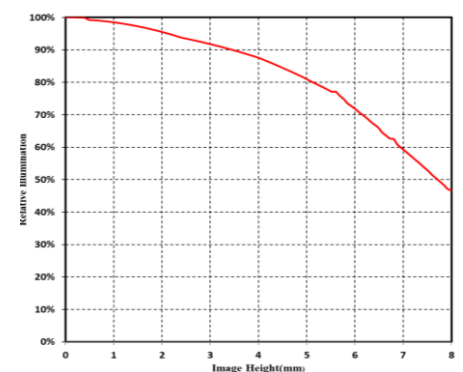
Distortion



MTF



Relative Illumination

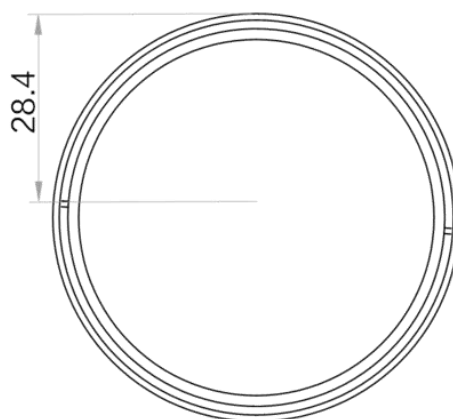
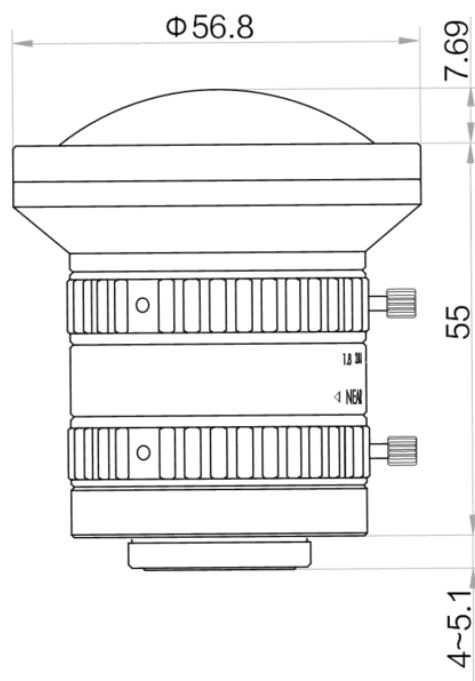


Note: The above curves are the simulate results based on F1.8, $\beta = -0.016$, WD=500 mm

Specification

Model	MVL-KF0818M-12MP
Performance	
Focal length	8 mm
F-number	F1.8 to F11
Image size	Φ16 mm (1")
Distortion	-4.12%
Minimum object distance	0.3 m
Field of view	D (15.86 mm): 90.06° H (12.45 mm): 77.16° V (9.83 mm): 61.3°
Mechanical	
Iris control	Manual
Focus control	Manual
Mount	C-mount
Flange back length	17.526 mm
Dimension	Φ56.8 mm × 55 mm (Φ2.2" × 2.2")
Weight	236 g (0.5 lb.)
Temperature	-10 °C to 50 °C (14 °F to 122 °F)
General	
Certification	RoHS 2.0

Dimension



Unit: mm

Field of View

Ring Thickness (mm)	Working Distance (mm)		Magnification	Field of View (mm)					
				1.1" (14.14 mm × 10.35 mm)		1" (12.45 mm × 9.83 mm)		2/3" (8.45 mm × 7.07 mm)	
				H	V	H	V	H	V
2	near	6.2	−0.3029	56.1	38.1	48.1	35.8	30.0	24.5
	far	18.5	−0.2128	78.3	53.2	66.5	50.1	42.2	34.7
1	near	25	−0.1789	92.2	62.9	78.4	59.2	49.9	41.1
	far	70	−0.0925	169.4	119.0	146.3	112.4	95.4	78.9
0.5	near	49	−0.1175	135.8	94.3	116.6	89.0	75.3	62.2
	far	250	−0.0323	485.0	347.9	423.4	329.4	280.8	233.1
0	300		−0.0258	582.0	417.8	508.2	395.6	337.4	280.1
	350		−0.0224	670.3	481.9	585.8	456.4	389.3	323.3
	400		−0.0197	758.6	546.0	663.4	517.1	441.2	366.5
	450		−0.0176	847.0	610.0	740.9	577.9	493.2	409.7
	500		−0.0160	935.3	674.1	818.5	638.6	545.1	452.8
	550		−0.0146	1023.6	738.2	896.0	699.3	597.0	496.0
	600		−0.0134	1111.9	802.3	973.5	760.1	648.9	539.2
	650		−0.0124	1200.2	866.3	1051.1	820.8	700.8	582.4
	700		−0.0115	1288.5	930.4	1128.6	881.6	752.8	625.6
	800		−0.0101	1465.1	1058.6	1283.7	1003.0	856.6	711.9
	900		−0.0090	1641.7	1186.7	1438.8	1124.5	960.4	798.3
	1000		−0.0082	1818.3	1314.8	1593.9	1246.0	1064.3	884.6

